

In The Claims:

1. (Currently Amended) A system for cataloguing electronic information, comprising:

an electronic device that captures audio/video data corresponding to a photographic target, said audio/video data including a narration concurrently provided by a narrator specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data;

a speech recognition engine that automatically performs a speech recognition process upon said narration to generate labels that correspond to said respective subject matter locations in said audio/video data, said labels being text conversions of utterances in said narration, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data; and

a label manager that manages a label mode for generating and storing said labels, said label manager also controlling a label search mode ~~for~~ that utilizes ~~utilizing~~ said labels to automatically locate said respective subject matter locations in said audio/video data.

2. (Original) The system of claim 1 wherein said electronic device is implemented as an audio/video camcorder device.

3. (Original) The system of claim 1 wherein said speech recognition engine is configured in a simplified configuration that efficiently compares said narration with acoustic models to identify phone strings that represent said narration, said speech recognition engine referencing a compact dictionary to look up recognized vocabulary words that correspond to said phone strings, said speech recognition engine utilizing a limited set of recognition grammar to form said recognized vocabulary words into said labels that are supported by said speech recognition engine.
4. (Original) The system of claim 1 wherein said label manager initially instructs said electronic device to enter a real-time label mode for creating and storing said labels, said electronic device concurrently capturing said audio/video data and said narration after said label manager instructs said electronic device to enter said real-time label mode.
5. (Original) The system of claim 1 wherein said electronic device enters a real-time label mode in response to a verbal label-mode command from a system user, said verbal label-mode command being recognized and provided to said label manager by said speech recognition engine.
6. (Original) The system of claim 1 wherein said speech recognition engine automatically generates said labels as said electronic device captures said audio/video data and said narration.
7. (Original) The system of claim 1 wherein a post processor performs a post-processing procedure upon said labels in a real-time label mode, said post-processing procedure including a validation procedure using one or more confidence measures to eliminate invalid labels that fail to satisfy pre-determined validation criteria.

8. (Original) The system of claim 1 wherein said label manager stores said labels during a real-time label mode, said labels being stored along with meta-information that associates each of said respective subject matter locations to a corresponding one of said labels.
9. (Original) The system of claim 1 wherein said electronic device initially captures said audio/video data and said narration prior to entering said label mode.
10. (Original) The system of claim 1 wherein said label manager instructs said electronic device to enter a non-real-time label mode for creating and storing said labels, said electronic device responsively retrieving and playing back said audio/video data and said narration.
11. (Original) The system of claim 1 wherein said speech recognition engine automatically generates said labels by analyzing said audio/video data and said narration as said electronic device plays back said audio/video data and said narration.
12. (Original) The system of claim 1 wherein a post processor performs a post-processing procedure upon said labels in a non-real-time label mode, said post-processing procedure including a validation procedure using one or more confidence measures to eliminate invalid labels that fail to satisfy pre-determined validation criteria.
13. (Original) The system of claim 1 wherein said label manager coordinates a label validation procedure for validating said labels, said label manager generating a validation graphical user interface upon a display of said electronic device for a system user to interactively evaluate, delete, and edit said labels.

14. (Original) The system of claim 1 wherein said label manager coordinates a label validation procedure for validating said labels in response to verbal validation commands from a system user, said verbal validation commands being recognized and provided to said label manager by said speech recognition engine.
15. (Original) The system of claim 1 wherein said label manager stores said labels in a non-real-time label mode, said labels being stored along with meta-information that associates each of said respective subject matter locations to a corresponding one of said labels.
16. (Original) The system of claim 1 wherein said label manager instructs said electronic device to enter said label search mode during which a system user interactively selects a search label for performing a label search procedure to locate a specific one of said respective subject matter locations corresponding to said search label.
17. (Original) The system of claim 1 wherein said label manager generates a label-search GUI on a display of said electronic device, a system user viewing said labels and corresponding representative images from said audio/video data for selecting a search label.
18. (Original) The system of claim 1 wherein a system user selects a search label by issuing a verbal search-label command, said verbal search-label command being recognized and provided to said label manager by said speech recognition engine.
19. (Original) The system of claim 1 wherein said label manager instructs said electronic device to automatically locate and retrieve a specific one of said respective subject matter locations in response to a system user selecting a search label.

20. (Original) The system of claim 1 wherein said electronic device automatically plays back a specific retrieved one of said respective subject matter locations from said audio/video data for viewing by said system user.

21. (Currently Amended) A method for cataloguing electronic information, comprising:

capturing audio/video data corresponding to a photographic target by utilizing an electronic device, said audio/video data including a narration concurrently provided by a narrator specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data;

providing a speech recognition engine that automatically performs a speech recognition process upon said narration to generate text labels that correspond to said respective subject matter locations in said audio/video data, said text labels being text conversions of utterances in said narration, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data;

managing a label mode for generating and storing said text labels by utilizing a label manager; and

controlling a label search mode with said label manager, said label search mode utilizing said text labels to automatically locate said respective subject matter locations in said audio/video data.

22. (Original) The method of claim 21 wherein said electronic device is implemented as an audio/video camcorder device.

23. (Original) The method of claim 21 wherein said speech recognition engine is configured in a simplified configuration that efficiently compares said narration with acoustic models to identify phone strings that represent said narration, said speech recognition engine referencing a compact dictionary to look up recognized vocabulary words that correspond to said phone strings, said speech recognition engine utilizing a limited set of recognition grammar to form said recognized vocabulary words into said text labels that are supported by said speech recognition engine.

24. (Original) The method of claim 21 wherein said label manager initially instructs said electronic device to enter a real-time label mode for creating and storing said text labels, said electronic device concurrently capturing said audio/video data and said narration after said label manager instructs said electronic device to enter said real-time label mode.

25. (Original) The method of claim 21 wherein said electronic device enters a real-time label mode in response to a verbal label-mode command from a system user, said verbal label-mode command being recognized and provided to said label manager by said speech recognition engine.

26. (Original) The method of claim 21 wherein said speech recognition engine automatically generates said text labels as said electronic device captures said audio/video data and said narration.

27. (Original) The method of claim 21 wherein a post processor performs a post-processing procedure upon said text labels in a real-time label mode, said post-processing procedure including a validation procedure using one or more confidence measures to eliminate invalid text labels that fail to satisfy pre-determined validation criteria.

28. (Original) The method of claim 21 wherein said label manager stores said text labels during a real-time label mode, said text labels being stored along with meta-information that associates each of said respective subject matter locations to a corresponding one of said text labels.

29. (Original) The method of claim 21 wherein said electronic device initially captures said audio/video data and said narration prior to entering said label mode.

30. (Previously Presented) The method of claim 21 wherein said label manager instructs said electronic device to enter a non-real-time label mode for creating and storing said text labels, said electronic device responsively retrieving and playing back said audio/video data and said narration.

31. (Original) The method of claim 21 wherein said speech recognition engine automatically generates said text labels by analyzing said audio/video data and said narration as said electronic device plays back said audio/video data and said narration.

32. (Original) The method of claim 21 wherein a post processor performs a post-processing procedure upon said text labels in a non-real-time label mode, said post-processing procedure including a validation procedure using one or more confidence measures to eliminate invalid text labels that fail to satisfy pre-determined validation criteria.

33. (Original) The method of claim 21 wherein said label manager coordinates a label validation procedure for validating said text labels, said label manager generating a validation graphical user interface upon a display of said electronic device for a system user to interactively evaluate, delete, and edit said text labels.

34. (Original) The method of claim 21 wherein said label manager coordinates a label validation procedure for validating said text labels in response to verbal validation commands from a system user, said verbal validation commands being recognized and provided to said label manager by said speech recognition engine.
35. (Original) The method of claim 21 wherein said label manager stores said text labels in a non-real-time label mode, said text labels being stored along with meta-information that associates each of said respective subject matter locations to a corresponding one of said text labels.
36. (Original) The method of claim 21 wherein said label manager instructs said electronic device to enter said label search mode during which a system user interactively selects a search label for performing a label search procedure to locate a specific one of said respective subject matter locations corresponding to said search label.
37. (Original) The method of claim 21 wherein said label manager generates a label-search GUI on a display of said electronic device, a system user viewing said text labels and corresponding representative images from said audio/video data for selecting a search label.
38. (Original) The method of claim 21 wherein a system user selects a search label by issuing a verbal search-label command, said verbal search-label command being recognized and provided to said label manager by said speech recognition engine.
39. (Original) The method of claim 21 wherein said label manager instructs said electronic device to automatically locate and retrieve a specific one of said respective subject matter locations in response to a system user selecting a search label.

40. (Original) The method of claim 21 wherein said electronic device automatically plays back a specific retrieved one of said respective subject matter locations from said audio/video data for viewing by said system user.

41. (Currently Amended) A computer-readable medium comprising program instructions for cataloguing electronic information by:

capturing audio/video data corresponding to a photographic target by

utilizing an electronic device, said audio/video data including a narration concurrently provided by a narrator specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data;

providing a speech recognition engine that automatically performs a speech recognition process upon said narration to generate text labels that correspond to said respective subject matter locations in said audio/video data, said text labels being text conversions of utterances in said narration, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data;

managing a label mode for generating and storing said text labels by utilizing a label manager; and

controlling a label search mode with said label manager, said label search mode utilizing said text labels to automatically locate said respective subject matter locations in said audio/video data.

42. (Currently Amended) A system for cataloguing electronic information, comprising:

means for capturing audio/video data corresponding to a photographic target, said audio/video data including a narration concurrently provided by a narrator specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data;

means for automatically performing a speech recognition process upon said narration to generate text labels that correspond to said respective subject matter locations in said audio/video data, said text labels being text conversions of utterances in said narration, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data;

means for managing a label mode to generate and store said text labels;
and

means for controlling a label search mode that utilizes said text labels to automatically locate said respective subject matter locations in said audio/video data.

43. (Currently Amended) A system for cataloguing electronic information, comprising:

an imaging device that captures audio/video data corresponding to selected photographic targets, said audio/video data including a verbal narration concurrently provided by a narrator specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data;

a speech recognition engine that automatically performs a speech recognition process upon said narration to generate text labels that are based upon said narration, said text labels corresponding to said respective subject matter locations in said audio/video data, said text labels being text conversions of utterances in said narration, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data, said text labels including abbreviated word sequences that identify said selected photographic targets; and

a label manager that manages a label mode during which said text labels are generated by said speech recognition engine, said label manager also storing said text labels during said label mode, said text labels being stored along with meta-information that associates said respective subject matter locations to corresponding ones of said text labels, said label manager also controlling a label search mode for utilizing said text labels to automatically locate specific corresponding ones of said respective subject matter locations from said audio/video data, said label manager providing a label-search user interface upon a display of said imaging device for displaying said text labels and corresponding visual images of said respective subject matter locations from said audio/video data, a system user interactively choosing a selected text label by utilizing said label-search user interface, said imaging device responsively displaying

said audio/video data from a selected subject matter location corresponding only to said selected text label.

44. (Currently Amended) A system for cataloguing electronic information, comprising:

- an electronic device that captures said electronic information that includes verbal narration data concurrently provided specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data;
- a speech recognition engine that analyzes said electronic information to generate labels that correspond to said respective subject matter locations in said electronic information, said labels being text conversions of utterances in said verbal narration data, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data;
- and
- a label manager that utilizes said labels to automatically locate said respective subject matter locations in said electronic information.

45. (Currently Amended) A system for cataloguing electronic information, comprising:

an electronic device that captures audio/video data corresponding to a photographic target, said audio/video data including a narration concurrently provided by a narrator to specifically mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data; and

a speech recognition engine that automatically performs a speech recognition process upon said audio/video data to generate labels that correspond to said respective subject matter locations in said audio/video data, said labels being text conversions of utterances in said narration, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data.

46. (Currently Amended) A system for cataloguing electronic information, comprising:

an electronic device that captures audio/video data corresponding to a photographic target, said audio/video data including a narration concurrently provided by a narrator specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data; and

a label manager that controls a label search mode for utilizing labels derived from said narration to automatically locate corresponding ones of said respective subject matter locations in said audio/video data, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data.

47. (Currently Amended) An electronic cataloguing system implemented by: capturing electronic data which includes a narration concurrently provided by a narrator specifically to mark ~~identify~~ where respective subject matter locations are positioned in said audio/video data; performing a speech recognition process upon said electronic data to automatically generate labels that correspond to said respective subject matter locations in said electronic data, said labels being text conversions of utterances in said narration, said labels each being specifically aligned with corresponding ones of said respective subject matter locations within said audio/video data; and utilizing said labels to automatically locate said respective subject matter locations in said electronic data.
48. (Previously Presented) The system of claim 8 wherein said meta-information includes video timecode information.
49. (Currently Amended) The system of claim 12 wherein said confidence measures include a label amplitude parameter and a label duration parameter, said label amplitude parameter being based upon a narration amplitude, said label duration parameter being based upon a duration of said narration.
50. (Previously Presented) The system of claim 17 wherein said representative images are implemented as thumbnail images.
51. (Previously Presented) The system of claim 1 wherein said electronic device is a single discrete video camcorder that hosts said speech recognition engine, said label manager, said labels, and said audio/video data.

52. (New) The system of claim 1 wherein said narration is recorded by a head-mounted sound-sensor device that is worn in close proximity to said narrator, said narration being identified for conversion into said labels by having a greater amplitude than other ambient sound that is recorded from more remote sources as part of said audio/video data.